REMARKS

Claims 1-25 are currently pending in the application. In the Office Action dated June 20, 2006, Claims 1-25 were rejected. By this Amendment, claims 1, 3, 24 and 25 have been amended for clarity. Claim 2 has been cancelled. No new matter has been added.

REJECTIONS

Double Patenting Rejection

Claims 1-25 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-54 of U.S. Pat. No. 7,047,253 and claims 1-26 of U.S. Pat. No. 7,051,039. The claims have been amended. Thus, the double patenting rejection is now moot.

Claims 1-25 of the instant application are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-16 of U.S. Application No. 10/648,577; claims 1-26 of U.S. Application No. 10/648,600; claims 1-34 of U.S. Application No. 10/648,749 (US Publication No. 2005/0050105); claims 1-47 of US Application No. 10/259,278 (US Publication No. 2003/104038); claims 1-26 of US Application No. 10/648,497 (US Publication No. 2005/0050056. The claims have been amended. Thus, the provisional double patenting is now moot.

Moreover, it is unclear which set of claims the Examiner is referring to in the double patenting rejection when both the Application number and the U.S. Publication number are listed. All the listed applications have claims that are now different from the corresponding published applications. Furthermore, U.S. Application No. 10/259,278 is now U.S. Patent No. 7,096,224.

101 Rejection

Claims 1-25 are rejected under 35 U.S.C. 101 because the invention is directed to non-statutory subject matter. Applicants respectfully traverse.

The claimed invention is useful because it increases the efficiency of loading data into a relational database. Specifically, the cost of generating the schema is amortized over multiple load operations to load data of the same schema type. Furthermore, this approach is protocol neutral so that multiple different protocol-based loads can operate with the same schema metadata information and load structures.

The claimed invention has practical application and the claims as amended produce a useful, concrete and tangible result. Specifically, the Examiner asserts that the claim is directed to an abstract idea because all the elements are part of software. Also, the Examiner asserts that claims 1, 24-25 neither displayed nor outputted to a user or otherwise used in the real world and no use is set worth that would constitute a real-world result. Applicants respectfully disagree.

Claims 1, 24-25 as amended explicitly recite "generating an in memory representation of the schema metadata." Therefore, the claimed invention is not just software and produces a real-world result as described above. Thus, claims 1-25 produces an useful, concrete and tangible result.

Moreover, claim 25 has further been amended by adding the phrase 'instructions for" as suggested by the Examiner.

Therefore, Applicants respectfully request the withdraw of the 101 rejections.

102 Rejection

Claims 1-4, 8-12, 14-15, 18 and 22-25 are rejected under 35 U.S.C. § 102(a) as being unpatentable over U.S. Patent Application 2002/0169788 A1 to Lee et al. (Lee) published on November 14, 2002 having a filing date of February 14, 2001. This rejection is respectfully traversed, as follows.

Claim 1 recites "determining if schema-specific load structures that is used to load the data into the database already exists; using the existing schema-specific load structures to load the data into the database if the schema-specific load structures already exists; and generating the schema-specific load structures to load the data into the database if the schema-specific load structures do not exist." In particular, the claim recites "schema-specific load structures." Lee does not teach or suggest any equivalent methods as claimed or any schema-specific load structures.

Lee discloses one general purpose loader 30. Specifically, Lee discloses:

> According to the method of this invention, which will be hereinafter described in greater detail, system 10 reads the DTD 18 with the extractor 24 and stores data representative of the DTD 18 in metadata tables in the metadata tables storage portion 34. From the data stored in metadata tables, the generator 28 generates the relational schema 22 in the relational database 14. In an optional loop, the optimizer 26 can massage the data stored in the metadata tables 34 to create a more efficient set of inputs for the generator 28 which, in turn, results in the

> generation of a more efficient relational schema 22. Next, once the relational schema 22 has been generated by the generator 28, a pattern-mapping table 36 is generated from the metadata tables and fed as an input to the loader 30 (in addition to the input of the XML data 16 from the document 12) which, in turn, provides an input to load the tables 20 and the relational database 14 with the XML data 16 stored in the document 12.

Thus, Lee discloses one loader 30 which loads XML data depending on the DTD information which assists in generating tables as input to the loader. Therefore, Lee has one loader. On the other hand, the present claimed invention includes a schema-specified load structure for each type of data (i.e. 26, 28). Thus, Lee does not teach or suggest the schema-specific load structures as claimed.

Moreover, to load the data, Lee performs the method including extracting the DTD and generating tables and loading the data using the tables (i.e. Fig. 2). Lee does not teach or suggest the steps of determining if schema-specific load structures that is used to load the data into the database already exists; using the existing schema-specific load structures to load the data into the database if the schema-specific load structures already exists; and generating the schema-specific load structures to load the data into the database if the schema-specific load structures do not exist.

Therefore, claims 1-4, 8-12, 14-15, 18 and 22-25 are patentable over 35 U.S.C. § 102(a).

103 Rejection

Claims 5-7, 13, 16-17 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee as applied to claim above further in view of Sarkar, U.S. Patent No. 6,418,448.

For the reasons cited above, Lee does not teach or suggest schema-specific load structures and the process as described above.

Sarkar discloses method and apparatus for processing markup language specification for data and metadata used inside multiple related internet documents to navigate, query, and manipulate information from a plurality of object relational databases over the web. respectively, and are patentable for at least those reasons discussed above with reference to the independent claims. The Examiner uses Sarkar to show protocol neutral; multi-tier architecture for web applications; excerpt from a RDF script describing SEQ container along with the corresponding entity-relationship and object definitions having virtual attributes and

virtual properties for resources. Sarkar is silent with respect to any schema-specific load structures and determining whether to use or generate the structure as claimed. Thus, Sarkar does not teach or suggest schema-specific load structures, and the steps of determining if schema-specific load structures that is used to load the data into the database already exists; using the existing schema-specific load structures to load the data into the database if the schema-specific load structures already exists; and generating the schema-specific load structures to load the data into the database if the schema-specific load structures do not exist.

Thus, Lee and Sarkar, singly or in combination, fail to teach or suggest the invention as a whole. Therefore, claims 5-7, 13, 16-17 and 19-21 are patentable under 35 U.S.C. 103(a).

CONCLUSION

On the basis of the above remarks, reconsideration and allowance of the claims is believed to be warranted and such action is respectfully requested. If the Examiner has any questions or comments, the Examiner is respectfully requested to contact the undersigned at the number listed below.

The Commissioner is authorized to charge any fees due in connection with the filing of this document to Bingham McCutchen's Deposit Account No. **50-2518,** referencing billing number **7035742001**. The Commissioner is authorized to credit any overpayment or to charge any underpayment to Bingham McCutchen's Deposit Account No. **50-2518,** referencing billing number **7035742001**.

Respectfully submitted,
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